

scope of the Carnegie monograph, but in South America and in other parts of the world. A mosquito taxonomist of great ability appeared in the British Museum of Natural History (F. W. Edwards) and, working largely with the Old World fauna, he arrived at conclusions coinciding in the main with those reached by Dyar. With the incoming of material from South America, and with the publication of the excellent "Monograph of the Mosquitoes of Surinam," by the Bonnes, the necessity for a supplemental volume to the Carnegie monograph became apparent. The interest of Dr. J. C. Merriam was enlisted and the consent of the trustees of the Carnegie Institution was gained for the preparation of a volume to include the mosquitoes of all the Americas. Dr. Dyar was a tireless worker, and by the close of 1928 he had completed the volume and had seen it published.

All these years he had been publishing shorter articles, both on mosquitoes and on Lepidoptera, and two as yet unpublished papers were left in completed form.

Thus has ended a life of intense scientific activity and one which undoubtedly has made important contributions to human knowledge.

L. O. HOWARD

U. S. DEPARTMENT OF AGRICULTURE

### SCIENTIFIC EVENTS THE BREEDING OF BENEFICIAL PARASITES

A LABORATORY for breeding beneficial parasites, established by the British Empire Marketing Board and under the control of the Imperial Bureau of Entomology, has now been at work for rather more than a year. According to a report in the *Journal* of the American Medical Association, consignments of insects have been sent out in response to requests from Canada, New Zealand, Australia, South Africa, Kenya, the Falkland Islands and different parts of England. Between 20,000 and 30,000 larvae of the pine tortrix, 90 per cent. infected with a parasite that attacks it in its larval stage, were recently collected (largely from Brandon, in Suffolk) for Ontario. Ontario also received 20,000 parasites of the greenhouse white fly, which was exported on whole tomato sprigs and sent over in cold storage. Adult parasites of a scale insect that attacks fruit were sent over in small sealed test tubes to Vancouver and provided with raisins for nourishment in transit. The wood wasp *Sirex* infests most timber-growing countries. Its larvae bore their way into tree trunks, leaving behind them neat circular tunnels in the wood. The *Sirex* parasite is another fly, *Rhyssa*, with a long ovipositor which it thrusts right through the grain of the wood

until it penetrates the body of the wood wasp larva, on which it lays its egg. Three hundred and fifty of these *Rhyssa* larvae have been collected in Devon and shipped to the Cawthron Institute in New Zealand. Australia and New Zealand have also received 30,000 larvae of the pear-slug infected with three species of parasites, collected mainly from northern France. The sheep blow-fly, a big greenbottle, lays its eggs in dirty and matted wool on living sheep, and the maggots that hatch out eat their way into the animal's body. There is, however, a parasite which in turn lays its eggs in the blow-fly maggot and eventually kills it. Hundreds of thousands of these maggots, with their appropriate parasites, are being bred at the laboratories, and some have already been exported in the chrysalis stage to Australia, South Africa and the Falkland Islands, where the blow-fly causes enormous loss of sheep life. Other recent exports include parasites of the woolly aphid of the apple, sent to India and Kenya Colony, and of the earwig, sent to New Zealand and Canada. Three Australian scientific men from the commonwealth department of entomology are carrying out research at the laboratories under the superintendent, Dr. Thompson, who is himself a Canadian. One is working on the sheep maggot, or blow-fly, already mentioned; one on a parasite of the apple-ravaging codling-moth, and one on an insect that attacks a troublesome weed, Saint-John's-wort. Dr. Myers, of the Farnham Royal staff, has gone to the West Indies to deal with tropical parasites, and he will organize shipments of beneficial insects between the various islands and British Guiana.

### MINERAL PRODUCTION OF THE UNITED STATES IN 1928

THE total value of mineral production in the United States in 1928 was approximately \$5,400,000,000, as estimated by the United States Bureau of Mines, Department of Commerce. This is a decrease of approximately 2 per cent. of the total value of mineral products in 1927 and is due almost entirely to a decrease in the total value of mineral fuels. Of these, the quantity and value of coal decreased; the quantity of petroleum produced changed little, but the value decreased, and the quantity and value of natural gas and natural gasoline increased as compared with 1927. The total value of metallic products shows an increase due to increase in quantity and unit value of copper and an increase in the quantity of iron produced. Decreases were shown for gold, silver, lead and zinc. The total value of non-metallic mineral products shows approximately no change. Decreases for some of these products were offset by increases for others.

The following figures give the estimated total value of metallic mineral products and non-metallic mineral

products other than fuels and of mineral fuels produced in the United States in 1928.

ESTIMATED VALUE OF MINERAL PRODUCTS OF THE  
UNITED STATES, 1928

Metallic .....	\$1,260,000,000
Nonmetallic (other than fuels) .....	1,240,000,000
Mineral fuels .....	2,900,000,000
Total .....	\$5,400,000,000

These estimates are subject to revision and replacement by precise figures as soon as the Bureau of Mines can complete the canvass of mineral industries just begun to obtain accurate statistics for the year 1928. In this canvass the bureau is sending to every mining, quarrying and well operating company an inquiry soliciting a report on the output of each mineral commodity by each producing establishment. Early success in this undertaking is dependent upon the continuation of the prompt and cordial response on the part of the mining companies which has been the basis of success in this statistical endeavor through many years.

#### THE AMERICAN PHILOSOPHICAL SOCIETY

ACCORDING to a statement sent from the society the 435 members were asked on February 1 to put in writing their views as to how the society can best carry out its program of intellectual stock-taking which was announced on January 12.

In the letter, Dr. Francis X. Dercum, president of the society, asked four questions and in making the letter public also gave out a statement setting forth what the stock-taking purposes to accomplish.

"The project of an intellectual stock-taking is as large an undertaking as we care to make it," Dr. Dercum wrote. "I believe that we can never approach finality; but I also believe that the society, which numbers among its membership leaders in all fields of intellectual advancement, is equipped to perform a distinctive service in promoting coordination of scientific and social efforts."

The questions incorporated in Dr. Dercum's letter are said to hold closely to the four tentative questions made public at the time of the announcement of the society's plan for an intellectual survey. They are as follows:

What to-day is the world's intellectual need?

Is there a drifting apart of the purely scientific interests and the humanistic interests?

Is there a loss of perspective and of grasp of fundamental principles by reason of specialization in education and in thought?

How can these interests and these branches of indi-

vidualistic learning be coordinated into one program with one common purpose—the promotion of all useful knowledge?

The answers to these questions, Dr. Dercum believes, will prove an invaluable guide to the society in its stock-taking enterprise.

The present American members of the society, according to Dr. Dercum, are divided by profession into 26 groups representing as many branches of learning. These groups and the numbers of members in each is as follows:

Anatomists, 7; anthropologists, 5; archeologists, 3; astronomers, 25; authors, 6; botanists, 24; chemists, 36; classical and modern philologists, 12; educators, 20; electrical engineers, 11; engineers, 17; geographers, 6; geologists, 25; historians, 18; lawyers, 23; mathematicians, 13; men of affairs, 10; meteorologists, 1; orientalists and comparative philologists, 10; paleontologists, 8; physicians, 17; physicists, 32; physiologists, 10; political economists, 4; psychologists and philosophers, 6; zoologists, 30.

In explaining what the society hopes to accomplish by means of its survey, Dr. Dercum pointed out that "all through the ages scientists, humanists, theologians, economists and inventors have been adding to the world's store of useful knowledge but that due to a lack of coordination and loss of perspective this store of knowledge is not being fully utilized. For this reason this intellectual stock-taking is being undertaken to determine, by symposium and synthesis, how all this materialism, this specialization, economic and intellectual, these divergent scientific and social opinions, can be brought together for human advancement."

#### THE ECLIPSE EXPEDITION OF THE NAVAL OBSERVATORY

THE eclipse of the sun in May will be observed by an expedition under the auspices of the Naval Observatory, which sailed for the Philippines on January 28, on the naval transport *Chaumont*, from San Diego, California. Commander C. H. J. Keppler is in charge of the expedition, while the scientific work is under the direction of Professor Wilbur A. Cogshall, of the University of Indiana. Mrs. Cogshall accompanies him as scientific assistant. The staff of the Naval Observatory is represented by Mr. Paul Soltenberger, the technical supervisor of the observatory's time service and an expert observer.

Lieutenant H. C. Kellers, Medical Corps, U. S. N., surgeon, is also acting in behalf of the National Museum for the collection of specimens of fauna and flora in the vicinity of the eclipse site, as he did in Sumatra during the 1926 eclipse.